

# THE MAKING OF PRAGMATICIST REASONING IN CHARLES S. PEIRCE: A PRACTICAL TREATISE ON LOGIC AND METHODOLOGY (1867-1883)

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## 3. INTRODUCTION AND SUMMARY

### 3.1 METHODOLOGY

When I set myself to the original task of re-ordering and completing the materials related to the making of *The Logic of 1873* in Volume 7 of the *Collected Papers*, which are included in the chronological edition of The Peirce Edition Project's *Writings 3* under the title [Toward a Logic Book (1872-73)]. I found very useful the indications made by Professor Joseph Ransdell in the web page *Arisbe*<sup>1</sup>; as he had included there, under the title *The 1870's, Toward a Book on Logic*, a more comprehensive set of manuscripts, some of which had been published in *Writings 2* due to the chronological divisions of the volumes in that edition.

Arthur W. Burks, the Editor of Volumes 7 and 8 of the *Collected Papers*, did not include in *The Logic of 1873* any of the remarkable papers on formal logic, like those pertaining the logic of relative terms, which undoubtedly belonged to this project of book on logic as Peirce's own tentative tables of contents<sup>2</sup> show. We believe this was due to the fact that the Editors of Volumes 1 to 6 of the *Collected Papers*, Charles Hatshorne and Paul Weiss, had included practically all of Peirce's published papers on formal logic in Volume 3, which was titled *Exact Logic*<sup>3</sup>. Neither did he include, for

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<sup>1</sup> [www.cspeirce.com/menu/library/bycsp/bycsp.htm](http://www.cspeirce.com/menu/library/bycsp/bycsp.htm) . See 'Truth and the 1870's Logic' link too.

<sup>2</sup> WMS181, W3: 18-20; and WMS220, W3: 81-82.

<sup>3</sup> From this period: "On an Improvement in Boole's Calculus of Logic" (1867), which we have included in the appendix to chapter 10 of Peirce's book on Logic of the 1870's we have composed following the indications in his texts; "Upon the Logic of Mathematics" (1867), included as chapter 9; "Description of a Notation for the Logic of Relatives" (1870), included in the appendix to chapter 10; "On the Algebra of Logic" (1880) and "On the Logic of Number" (1881), discussed in the Antecedents and Context section of our Dissertation; "The Logic of Relatives" (1883), included as part of the content of chapter 10; and "On the Algebra of Logic: A Contribution to the Philosophy of Notation" (1885), which we have discussed in the Epilogue to our Dissertation.

similar reasons, any of Peirce's texts on Categories nor Signs nor Inference, which were to be three significant chapters in Peirce's 1870's Logic book.

On the other hand, Arthur W. Burks, in the Bibliography we find in Volume 8, presented the reader with a chronological listing of the texts included in the eight volumes of the *Collected Papers*. This work allows for a more coherent reading of that ambitious publication, particularly with the aid of the digital edition by InteLex<sup>4</sup>, which greatly facilitates the access to a chronological ordering of the texts. This is still of great help, because of the time it is taking to complete the chronological edition of the *Writings of Charles S. Peirce*, which will become the work of reference for all future Peirce studies, as it has been for us in the period we believe the project of this logic book comprises (1867-1883), with the vast majority of related texts published in Volumes 1 to 4 of this edition.

After reviewing all these published materials concerning the project of an unpublished book on logic by Peirce in the 1870's, I started checking the original manuscripts (R360 to R396), of which there are microfilmed copies at the University of Navarra Peirce Studies Group, and, finally, opted to follow Peirce's own indications in the manuscripts themselves: the tentative tables of contents that explicitly appear in WMS181(Winter-Spring 1872) and WMS220 (March 1873), and in the first lines of WMS218 (March 10 1873), the titles of some of the manuscripts, which include references to chapters, and the suggestions regarding chapter ordering which we can find incorporated into the text of some other manuscripts of the series. This task is full of complexities as there are alternative versions in the numbers and titles of several chapters we find in the headings of the manuscripts, as if Peirce had in mind two complementary books of logic at that time, one destined for a general cultivated audience and the other for students of logic. On the other hand, I am inclined to believe, according to my own research and according to the indications in Professor Nathan Houser's 'The fortunes and misfortunes of the Peirce papers' presentation<sup>5</sup>, that this is partly due to the fact that Peirce's voluminous legacy did suffer a systematic disarrangement, including the misplacement of manuscripts originally left by Peirce

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<sup>4</sup> *Collected Papers of Charles S. Peirce*, vols. 1-8. Electronic edition by John Deely, Charlottesville, VA: InteLex, 1996.

<sup>5</sup> Presented to the Fourth Congress of the International Association for Semiotic Studies, Perpignan, France, 1989. Published in *Signs of Humanity*, vol. 3. Eds.: Michel Balat and Janice Deledalle-Rhodes; Gen. Ed.: Gérald Deledalle. Berlin: Mouton de Gruyter, 1992, pp. 1259-1268. Easily accessible at the *Arisbe* web page (see Note 1).

himself in acceptable orderly thematic-chronological bundles; even misappropriations and loss. Additionally, the first volumes of the *Writings* edition, besides not publishing all the materials available, lack a precise chronological ordering due to the absence of a precise date in the heading of many of the manuscripts, and, finally, are not rigorous in a thematic re-arrangement. Not to mention the abundance of reiterations and redundancies made by Peirce in different tentative versions of many of the manuscripts, including *Amanuensis*'. All of these facts add to the apparent disorder and confusion in the presentation of Peirce's early thoughts.

Nevertheless, I made the decision of working, in particular, with the very plausible hypothesis that Peirce, first, plans a tentative table of contents for the first chapters (WMS181/1872) of his Logic Book, which he later completes with a second tentative table of contents (WMS220/1873) and a Chap. 6<sup>th</sup> (WMS218) which was not included in either of the explicit tables of contents, and which, together with a Chap. 5<sup>th</sup> (WMS217) provides some additional clues for an alternative order of chapters 3 and 4 in WMS181's table of contents, also, in accordance with WMS220 table of contents. However, when he starts developing the content for each of the first chapters, he finds that they may need further development. As he did not re-capitulate and give a conclusion to this book at the time, we are left with the task of presenting it in the most orderly form possible, according to Peirce's own indications, notwithstanding, in some cases, the adoption of some justified personal decisions as regards the building up, from the bulk of related texts, of the main content for each chapter, leaving other alternative, or redundant, versions for the corresponding appendixes.

I have, then, proceeded to justify and explain every step I have taken in the direction of a thematic-chronological re-ordering of the texts which belong to this project of a first Book of Logic by Peirce from the years 1867 to 1883. We are looking forward to the long awaited edition in *Writings 11* of the texts corresponding to his later project of *How to Reason* or (*Grand*) *Logic* and *Minute Logic*, in order to proceed with a similar task which will render a more accurate picture of his more developed reasoning on this subject, which would have found its consummation in his latest project, *A System of Logic, considered as Semeiotic*.

Peirce had, as early as 1869, contemplated the writing of a book on logic to which belong, in the *Writings 2 Edition: A preliminary sketch of logic* (WMS154/Autumn 1869), *Lessons in Practical Logic* (WMS164/Winter 1869-70), *A practical treatise on*

*logic and methodology* (WMS165/Winter 1869-70). This last manuscript includes a first division in chapters: chapter I being devoted to the content of the book and, alternatively next, to the Rules for Investigation; and a draft of a chapter 2 about the final opinion which “would result from proper reasoning concerning all the experience so far had by men”. He, then, renames, apparently in the same manuscript, the projected book ‘Practical Logic’, the title the Editors of *Writings 2* chose for this section, where we can find a chapter I which is almost identical to the former second version of that chapter, and a chapter 2, which is significantly different to the former version, where he includes some axioms as regard “the true function of reasoning”, and an advance on the methods of fixing opinion he will later develop in the 1872-73 manuscripts which will, finally, reach culmination and publication in *The fixation of belief*, his first essay in the *Illustrations of the Logic of Science* series, in 1878. In WMS166 (Winter 1869-70) we find a revised version of a chapter 2 where the axioms develop into four definite Maxims of Reasoning, significantly “Maxim IV: *Things are not just as we choose to think them*”; which would belong in the last chapter of the second tentative table of contents of 1873 (WMS220).

A revision of the *Description of a notation for the logic of relatives* (WP52/January 1870) was, later, to be included in the second tentative table of contents. *A system of logic* (WMS169/Winter-Spring 1870) is a draft of a chapter I on Syllogism and the essential features of an argument. We also find, at that time, an isolated WMS171/Spring 1870, *Notes for lectures in logic*, which strongly points to the loss of some related manuscript(s). This first project appears to be that of a text book for a course on logic. All the pertinent materials for it, both published and unpublished, are included in the corresponding chapters and appendixes.

Further back, in 1867, in the conferences included in the American Academy Series, we find the content for some of the chapters of the Book on Logic of the 1870’s as formulated in the aforementioned tentative tables of contents: *On a new list of categories*, *Upon the logic of mathematics*, and *Upon logical comprehension and extension* (which would later be revised as *Logical breadth and depth* in WMS233/ Spring 1873, *Writings*, vol. 3). And an isolated WMS144/ Summer-Fall 1867 titled *Chapter I. One, two three*; where he defines the terms ‘is’, ‘entity’, ‘reality’ (with a first approximation to the realist concept of it being independent of whatever we may think about it), and ‘quality’ in reference to his Categories.

Additionally, following professor Max H. Fisch's indications, in his book *Peirce, Semeiotic, and Pragmatism*, the first formulation of Peirce's theory of signs, which represents a significant chapter in his projected 1870's book of logic, can be found in the aforementioned article, *On a new list of categories* (1867), and in the series published in the Journal of Speculative Philosophy: *Questions concerning certain faculties claimed for man* (1868); *Some consequences of four incapacities* (1868); and *Grounds of validity of the laws of logic: further consequences of four incapacities* (1869). Particularly, in parts of the second of these essays which was published in Spanish by Madrid's University Complutense Professor José Vericat, in 1988, in his selection of texts by Peirce titled *Man, a Sign*. Additionally, in former parts of this same article we can find certain very relevant considerations on regard with the nature of inference, another important chapter of the projected book. Whereas in the last of these essays we find, besides further discussion on inference, some interesting considerations on regard with the principles of formal logic, which would belong to the last chapter of the projected book: *Maxims of Reasoning*. We must note that in Peirce's discourse, in those years, the subjects of signs, categories and inference interweave in his argumentations about any of these subjects.

It is clear, then, that the materials for a projected first book on logic by Peirce belong to the years between 1867 and 1877/78, when *The fixation of belief*, *How to make our ideas clear* and the other four articles included in the *Illustrations of the Logic of Science* series were presented. We can find practically the full version of the first article in the manuscript drafts destined for the first chapter of the Logic book in 1872 and, also, some very relevant texts which were employed for the second article in the drafts for chapter 2, *On Reality*.

However, I would push the timeline of his project even further, up to 1883 when he was forced to conclude the courses on logic he imparted at Johns Hopkins University, where he most likely used a great deal of the materials intended for the book, although very little of his own and the students' notes was published by Peirce himself under the title *Studies in Logic* in 1883<sup>6</sup>. We can find, in them, some of the content which would complete some of the chapters, especially, *A Theory of Probable Inference*, which he

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<sup>6</sup> Peirce's student Allan Marquand's original notes are kept at Princeton University and there is a copy at the Peirce Edition Project in the University of Indiana. The study of these notes would shed a new light on this working hypothesis as Professor Cornelis De Waal has suggested to me.

later had in great regard<sup>7</sup>, and a *Note B* concerning the logic of relatives, which is very clarifying to relate to his original work on this subject of 1870. We owe Professor Max H. Fisch the reference to the Syllabi and recommended readings Peirce made for his courses on Logic, that can be found in the *University Circulars*, in his paper ‘Peirce at the Johns Hopkins University’(1952), published in his collection of essays *Peirce, Semeiotic, and Pragmatism*<sup>8</sup>, the final clues for the completion of this project. In the description of the General Logic course Peirce imparted at Johns Hopkins in 1879-80 we find the following description: “A general course, treating the foundation of logic and deducing the theory of subject from physiological facts. Subjects treated: clearness of apprehension; doctrine of limits; syllogistic (a new analysis); the doctrine of logical breadth, depth, and area; logical algebra and the logic of relatives; probabilities; theory of errors; induction and hypothesis” (C3:25). And in the July 1882 edition of the Johns Hopkins *Circulars*<sup>9</sup> the introduction to his Advanced Logic course was about “Psychological and Metaphysical facts upon which the possibility of Logic rests” (C16:234), and the recommended readings for this section included *Questions concerning certain faculties claimed for man, Consequences of four incapacities, The validity of the laws of logic, The fixation of belief, and How to make our ideas clear*. Both references are, so far, consistent with my working hypothesis on this regard.

These dates are more extensive than those proposed by Professor Ransdell: 1869-1873; because they include both published and unpublished materials following the indications of the tentative tables of contents Peirce had made himself for the projected book in 1873. The book appears to be taking the shape of both a divulgation and a course manual on Logic, both elementary and advanced, which is not exempt of certain complexities which would make it, at certain points, difficult to follow for beginners in Logic. I have opted, then, to follow the indications which would lead to a course manual on logic; as the divulgation book would have had its expression in the well-known articles belonging to The *Illustrations of the Logic of Science* Series, published in the *Popular Science Monthly* in 1877-88, from which, nevertheless, the content of some chapters of the manual would unavoidably have to coincide at times, particularly with

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<sup>7</sup> See *A Guess at the Riddle* (1887).

<sup>8</sup> Indiana University Press, Bloomington, 1986.

<sup>9</sup> University, Johns Hopkins. 1882. *Circulars*. Baltimore, MD: John Murphy & Co. Woodworth, R.S. 1930. We are, also, indebted to Professors David Agler and Deniz Durmus for their timely reference mentioned in their Transactions article published in number 3, vol. 49 (Summer 2013), *Christine Ladd-Franklin: Pragmatist Feminist*.

the first two, *The Fixation of Belief* and *How to Make our Ideas Clear*, as already mentioned. On the other hand, the *Illustrations of the Logic of Science* lack any reference to Peirce's theories of the categories and of signs, which were to be two significant chapters in the projected logic book.

Finally, I believe that the most appropriate title for this book, the most significant one expressed by Peirce in his manuscripts in those years, together with the alternative *Lessons in Practical Logic* (WMS164) and *A System of Logic* (WMS169), would be *A Practical Treatise on Logic and Methodology* (WMS165); this title aligns nicely with Peirce's description of the object of this normative science in his *Introductory Lecture on the Study of Logic* about the courses he was, then, imparting, published in the Johns Hopkins University Circulars of November 1882 (WP225). In the first paragraph, he commences in a similar fashion as he had done in WMS165 (winter 1869-70), following Petrus Hispanus well-known definition, and concludes: "...this general conception (of logic), that it is the *art of devising methods of research, - the method of methods, - is the true and worthy idea of the science. Logic will not undertake to inform you what kind of experiments you ought to make...; but it will tell you how to proceed to form a plan of experimentation.*" I have included this conference in full as the *Epilogue* to the book.

### **3.2 ARTICULATION OF CHAPTERS**

The compilers of *The Logic of 1873* (L1873) in the Collected Papers did not contemplate the articulation of Peirce's projected first book of logic, although they mention in their first footnote that the materials belong to that project. They acknowledge to have limited themselves to the selection, and re-naming, of a set of associated manuscripts in Widener IB2-8 belonging to the period 1872-73.

Apparently because the first tentative chapter 1 of that work, *Of the difference between doubt and belief* (WMS187/May 1872) appears in its entirety in the essay *The fixation of belief*, published in the *Popular Science Monthly* in 1877, they do not include it in their selection. Neither do they include, for the same reason, I believe, chapter 2, *Of inquiry* (WMS188/May-June 1872). This manuscript, disconnected and incomplete in the *Writings* 3 edition, appears in its entirety in section three of *The fixation of belief*. Neither do they include chapter 3, *Four methods of settling opinion* (WMS189/May-

June 1872), which, likewise, appears in its entirety in sections four and five of that published essay.

They do, however, point to the importance, in footnote 2, of *The fixation of belief* and *How to make our ideas clear*, also published in the *Popular Science Monthly* in 1878; because Peirce, in 1909, tried to articulate both essays into a single one under the title *My Pragmatism* which would have been the first chapter of a book provisionally titled *Essays towards the interpretation of our thoughts*. On page 1 of the draft, in a preface for the work, headed with the title ‘MEANING, Pragmatism’, Peirce says:

The main part of this Essay, -the characterizations of Belief and of Doubt, the argument as to the effective aim of inquiry, the description of four methods directed toward that aim, with the criticisms of them, the discussion of the proper function of thinking, and the consequent maxim for attaining clear concepts, -reproduces almost verbatim a paper I read, -it must have been in 1872, - to a group of young men who used, at that time, to meet once a fortnight in Cambridge, Mass., under the name of ‘The Metaphysical Club’, - a name chosen to alienate such as it would alienate.

In footnote 1 the compilers of *LI873* had also mentioned that William James in a letter to his brother Henry dated November 24, 1872, writes: “Charles Peirce... read us an admirable introductory chapter to his book on logic the other day.” It is clear, then, the significance Peirce attributed to the making of those two essays, which is closely related to the projected book of logic of the early 1870’s and the first formulation of the ‘Maxim of Pragmatism’.

The compilers of *LI873*, who gave that name to the selection of manuscripts they had made for Volume 7 of the *Collected Papers* (CP 7.313-361), begin their first section (7.313-7.325), under the title ‘INVESTIGATION’, with a manuscript (WMS182) which is an enlarged abstract, in Peirce’s heading, of a projected Chapter 1 to which they added, in footnote 3, the characters of belief taken from an undefined “Of Reality” manuscript: “the characters of belief are three. First, there is a certain feeling with regard to a proposition. Second, there is a disposition to be satisfied with the proposition. And third, there is a clear impulse to act in certain ways, in consequence”. And also added R363 in their footnote 4, a fragment, which we cannot find in *Writings* 3 as Professor Ransdell pointed out, intended to illustrate the distinction in grade between belief and doubt which Peirce mentions at the end of WMS182. This first section continues with some fragments from WMS181, then WMS180, which was titled by Peirce *Investigation and the settlement of opinion*, and, finally, they give an end to



this their first section with WMS179, titled by Peirce as *Logic, truth and the settlement of opinion*.

In the next section, under the title 'LOGIC', they include WMS196 (R369) incomplete, which, according to Peirce's divisions, looks more like a text connecting the chapters on 'The method of investigation' and 'On Reality', and which 'in full' mentions, as well, inference and time on regard with thought. In the following section, under the title 'OBSERVATION AND REASONING', they include, again incomplete, WMS200 (R367), which had been titled by Peirce 'Chapter 4. Of Reality'. Next, under the accurate, heading 'REALITY', they include WMS194 (R370) complete, which was titled by Peirce 'On Reality'. Section 5, which they titled 'TIME AND THOUGHT', corresponds with WMS216 (R376) complete. In Section 6, under the title 'BELIEF' they include WMS217 complete. This manuscript, which is fundamental for the articulation of one of the versions of Peirce's projected book on logic, has the simple heading 'Chap. 5th', and speaks of the way in which the general qualities of cognition, or categories, point to other cognitions, or the relation between inferences and beliefs, and, also, of signs. Finally, in Section 7, under the title 'PRAGMATISM', they include WMS239 (R392), which Peirce had titled 'Chapter V. That the significance of thought lies in its reference to the future', which, although it contains two references to the maxim of pragmatism, would better belong, I think, as a continuation of the previous one (WMS238) titled 'On time and thought' by the editors of *Writings 3. The Logic of 1873* and its footnotes, translated into Spanish, appear as an appendix to this thesis.

On the other hand, the compilers of the chronological edition of *Writings 3* begin their section titled 'TOWARD A LOGIC BOOK, 1872-73' with five manuscripts, all of them dated, without precision, in the Winter-Fall 1872. They had first presented in the volume, two isolated items: WMS191(Summer-Fall 1872) which was titled by Peirce 'Lecture on Practical Logic', and would certainly have been extracted from the content of the chapter 'On Reality'; and MS192, *Third Lecture* ('How can thought think of itself?'), which would also been extracted from material destined to the book.

Back to the five initial manuscripts of this section, in the first one, WMS179, titled by Peirce *Logic, Truth and the Settlement of Opinion*, which corresponds to CP 7.321-325 (*L1873*), he depicts a third method for settling opinion, which he later discarded and I believe is not exempt of interest, especially nowadays, that of "cultivating a public opinion". In the second one, WMS180, *Investigation and the Settlement of Opinion*,

which corresponds to CP 7.317-320 (*L1873*), he still sustains ‘public opinion’ as the third method.

The third manuscript, WMS181, titled *Chapter 1* by Peirce, is a very clarifying text on regard with the four methods of settling opinion, above all “investigation the *natural* procedure of the mind”, as the content for chapter 1, and reality as the content for chapter 2; and we can also find in it the tentative table of contents for the following first chapters of his projected book: Chapter 3: Categories; Chapter 4: Nature of signs; and Chapter 5: Nature of inference in general. It was fragmentarily included in CP 7.315-316, although in footnote 5 of *L1873* they present an abstract of this text and a single paragraph, which is a criticism by Peirce of the third method now called “the natural development of opinion”, and constitutes a bridge towards the latter *a priori* method, and fails, following Peirce’s familiar argument, when “one community comes in contact with another”: “In this way once more the conviction is forced on man that another’s opinion, if derived by the same process as his own, is as good as his own, and that other’s opinion is taken by him for his own. Then he says *we* in the sense of the learned world”. However, they do not end this paragraph in the footnote with “Individuation, isolation, consists in individual imperfection”, as Peirce did. And there is no mention whatsoever to the division in chapters presented in that fundamental WMS.

In WMS181 we, also, find the following abstract for a chapter 2 *On Reality*:

That mental action called investigation leads ultimately to a conclusion not dependent on the initial condition of belief. The process consists of two parts: the determination of judgments by previous judgments, & the origination of new judgments.

Conclusion therefore ultimately dependent on these fresh judgments. Yet these are entirely accidental & various. The fact is then they are destined to be such that a certain conclusion will ultimately result.

Two visions of reality”.

Different versions of these two visions of reality, the nominalist and the realist, are depicted in the displaced WMS191, albeit in a peculiar way, and, especially, in WMS194 and WMS204.

From WMS182, titled ‘Chapter 1(Enlarged abstract)’ by Peirce, the very beginning of *L1873*, CP 7.313-314, was extracted, with the addition of two, already

mentioned, footnotes which do not belong to this manuscript. WMS183 is just a slightly different version of it.

The selection continues with WMS187, dated May 1872, which is the aforementioned *Chapter 1. Of the difference between doubt and belief*. WMS188, dated May-June 1872, titled *Chapter 2. Of Inquiry*; which appears disconnected in the *Writings* 3 edition, and of which Peirce must have kept a complete copy as it appears in full in *The fixation of belief*. WMS189, also dated May-June 1872, titled *Chapter 3. Four methods of settling opinion*, also disconnected here and also complete in *The fixation of belief*, in which Peirce develops on the *a priori*, as the third method, which he had not included, at length, in former versions.

In consequence, following my initial hypothesis, the tentative table of contents in WMS181 was altered, making of that *Chapter 1: Doubt and belief, Four methods of settling opinion and Investigation*; the three chapters found in the headings of WMS187, WMS188 and WMS189. For the same reason, the intended *Chapter 2. On Reality*; became, indistinctly, Chapter IV, 4 or title only in the heading of the different versions that subsequently appear: WMS194: *On Reality*, WMS195: *Chapt. 4 (2<sup>nd</sup> draft)*, WMS196: *Chap. 4 (\_\_\_ draft)*, WMS197: *On Reality*, WMS198: *On Reality*, WMS200: *Chap. 4. Of Reality*, WMS203: *Of Reality*, WMS204: *Chapter IV. Of Reality* and WMS205: *Chapter IV. Of Reality*. And not all of the manuscript materials available for this purpose have been included in this edition, e.g.: WMS201: *On Reality* (R935) and WMS202: *On Reality* (R371), although they are included in the Chronological List near the end of *Writings* Volume 3. These reflections on reality find a condensed published expression in Section IV of *How to make our ideas clear* (1878).

Following the order and headings of the manuscripts in the *Writings* 3 Edition, next we find a *Chapter \_\_\_*. *The list of categories* (WMS207), which would belong to Chapter 3 in WMS 181's table of contents; *On Representations* (WMS212 and WMS213) and *On the Nature of Signs* (WMS214), which would belong to Chapter 4 in the afore mentioned table of contents. Then, WMS215 and WMS216 [W3: *On Time and Thought*]. WMS216 was included in *LI873* (CP 7.346-353) under the heading 'Time and Thought'. At the end of the selection 'Toward a Logic Book' in this edition, and after nine other manuscripts we will present later, we find three associated manuscripts: WMS237: *Chapter IV. The conception of time essential in Logic* (1-2 July 1873); WMS238: *Chapter IV. The conception of time essential in Logic* (1 July),

another version which was mentioned in footnote 17 to the PRAGMATISM Section in *L1873*; and WMS239: *Chapter V. That the significance of thought lies in its reference to the future*, which was included at the end of *L1873* (7.358-361) under the heading PRAGMATISM. In footnote 17 to this section in *L1873* we find: “A draft of Chapter IV, *The conception of Time essential in Logic*, dated 1873 July 1, seems to belong with this Chapter V as parts of one series.” However, they would not relate it to their own previous heading “TIME AND THOUGHT”; which would belong in a Chapter 3 of the revised first tentative table of contents I have developed from WMS181 and the associated manuscripts this far.

Along the way we have encountered a *Chap. 5<sup>th</sup>* (WMS217/March 10<sup>th</sup> 1873) which was placed after WMS216 in this edition. It is about inference and was included in *L1873* (CP 7.354-357) under the heading BELIEF. This one does correspond to the title for Chapter 5 in WMS181’s table of contents: Nature of inference in general.

*Chap. 6<sup>th</sup>* (WMS218), also of March 10<sup>th</sup>, adds further clues and complications to the alternative indexations of the tentative book: It claims it is about the causal connection between a thought and the thing to which it relates (an element of the sign), although the content expands on the conception of reality, and estates, at the beginning, that a Chap. 3 is about signs, and a Chap. 4 is about ‘the general qualities of cognitions... or categories’, which alters the order of the chapters on signs and categories in WMS181 table of contents for the first five chapters, although in accordance with WMS220 table of contents for chapters seven to 17, as we will see next; and that a Chap. 5, as we have just seen, is about how cognitions address themselves to other cognitions, or inference.

Combining the information in WMS181 with the aforesaid manuscript headings and content I would venture a tentative table of contents for the first chapters, thus:

**Chapter 1. The Settlement of Opinion** (1.1 Introduction. Logic, truth and the settlement of opinion; 1.2 Of the difference between belief and doubt; 1.3 Of inquiry; 1.4 Four methods of settling opinion; 1.5 The scientific method). Where I have subsumed back into MS181’s Chapter 1 all further developments found in this series manuscripts.

**Chapter 2. Of Reality.** Which corresponds to WMS181’s table of contents. And presents a complex set of manuscripts to choose from.

**Chapter 3. On Time and Thought.** As it follows from the ‘On Reality’ manuscript series. Whereas the chapter on the Categories, which was Chapter 3 in WMS181, has been, thus, displaced to chapter 4 because of the inclusion of this present chapter, putting aside what we have seen in WMS218 and we will see in WMS220 table of contents, that the chapter on Signs ought to come first, because Peirce’s first consistent formulation of his theory of signs appears in the second part of *On a new list of categories* (1867), and so is chronologically previous to his further development of the subject in the Journal of Speculative Philosophy series, especially in parts of *Some consequences of four incapacities* (1868).

**Chapter 4. The general qualities of cognitions or Categories.** Which would correspond to chapter 3 in WMS181’s table of contents and has been displaced by the additional chapter 3, on time and thought, corresponds to a chapter 4 in the information given at the beginning of WMS218. In that same manuscript, Peirce explicitly declares that “*We have seen* that a cognition is a sign, and that every sign has these three elements: First, the qualities which belong to it in itself as an object; second the character of addressing itself to a mind; and thirdly, a causal connection with the thing it signifies. In the fourth Chapter we have seen what the general qualities of cognitions in themselves are [or Categories]. In the last chapter [5] we have considered how they address themselves to other cognitions [or Inference]. We have now to consider [chapter 6] what is the nature of the causal connection between a thought and the thing to which it relates [an element of the sign].” It includes Peirce’s seminal work *On a New List of Categories* published in The American Academy Series in 1867 and the brief update in WMS207 from 1872-73.

**Chapter 5. Nature of Signs.** With sections devoted to Representation and the Nature of Signs. In coincidence with WMS181 table of contents’ chapter 4, because of the aforementioned displacement. I have opted to put aside the indications, in both WMS218 and in WMS220 table of contents, to place the chapter on signs before the chapter on the categories for the reasons I have explained before.

**Chapter 6. Nature of inference.** Which would have corresponded to WMS181’s table of contents, to the heading in WMS217 and to the mention in WMS218 as Chapter 5, displaced, again, because of the inclusion of a new chapter 3. On the other hand, a Chapter 6 is neither mentioned in WMS181’s tentative table of contents for the first five chapters nor in WMS220’s tentative table of contents for chapters seven to 17.

In WMS220: *Memorandum: Probable Subjects to be treated of* (between 11 and 14 March 1873); we find the following tentative table of contents for chapters seven to 17 of the projected book:

- Chap. 7. Of Logic as a Study of Signs.
  - 8. " Three Classes of Qualities.
  - 9. " Space as Essential in Logic.
  - 10. " the Copula and Simple Syllogism.
  - 11. " Logical Breadth and Depth, and Distribution and Composition.
  - 12. " the Collective Senses of Terms and of Number.
  - 13. " the Mathematical Method of Reasoning.
  - 14. " Relative Terms.
  - 15. " Conjugative Terms.
  - 16. " Probabilities.
  - 17. " Maxims of Reasoning.

And here we find the Gordian knot in Peirce's alternative versions for the book's table of contents, as the chapter on categories and on signs had been already assigned to chapters 3 and 4, respectively, of the tentative table of contents for the first chapters we find in WMS181. And which I have displaced to chapters 4 and 5, because of the inclusion of a 'new' chapter 3 on time and thought. I proceed, then, to carefully try a possibility of untying the knot.

Continuing with the order in *Writings 3*, we find the following manuscripts: WMS221: *Chap. 7. Of Logic as a Study of signs*; which chapter would have to include, as well, the former manuscripts on representations and on the nature of signs mentioned before: WMS212, WMS213 and WMS 214, which belonged to WMS181 tentative table of contents' Chapter 4. WMS223: *Chap. 9<sup>th</sup>*; where, instead of speaking about 'space as essential in logic' as the table of contents in WMS220 would tell, Peirce writes about denotation and connotation which would seem to belong to chapter 11 in WMS220, *On logical breadth and depth*. WMS229: *Chap. VIII. Of the Copula*; which belonged to Chapter 10 in the Memorandum. WMS230: *Chap. IX. Of relative terms*; which belonged to Chapter 14. WMS232: *Chap. X. The Copula and Simple Syllogism*; in correspondence with the Memorandum's table of contents. WMS233: *Chap. XI. On Logical Breadth and Depth*; also in correspondence with the Memorandum's table of contents. To end up with the aforementioned manuscripts, WMS237, WMS238 and WMS239, *On Time and Thought*, chapter IV/V. And an incomplete and isolated WMS240: *Notes on Logic book* (Summer 1873), which sheds some additional light

upon the subject of the book. Thus concludes the Writings 3 Edition on Peirce's 1872-73 book of logic.

With all of the available pieces together I, now, venture a 'Guess at the riddle'<sup>10</sup> continuation of a final tentative table of contents as follows: taking into account that I have included an extra Chapter 3, on time and thought, and that Chapter 7 according to WMS220, on signs, and Chapter 8, on categories, had already been included as Chapter 4 and 5 according to the indications in WMS181, putting aside the opening lines in WMS218 and in WMS220 *Memorandum* of contents as regards which ought to come first. On the other hand as I have unfortunately not found any materials, of the period we are considering, which would fill neither the projected chapter 9 of MS220's table of contents, *Of space as essential in logic*, nor chapter 12, *Of the collective senses of terms and of number*, I have been forced to discard both of them. Whereas my proposal of a 'final' table of contents for this projected book would run thus:

**Chapter 7. Of the Copula and Simple Syllogism.** As WMS220's Chapter 8 on the categories, *Of Three Classes of Qualities*, has already been included as Chapter 4, following the indications in WMS181's table of contents and the displacement in chapter 3, I have included this chapter 10 in WMS220's table of contents here. It includes WMS229, WMS232 and *On the Natural Classification of Arguments*, belonging to the American Academy Series, published in 1867.

**Chapter 8. Of Logical Breadth and Depth,** (and Distribution and Composition). In correspondence with WMS220's table of contents and WMS233 title, Chapter 11. It includes, in chronological order, WMS233, WMS223 and a former paper as published in The American Academy Series in 1867: *Upon Logical Comprehension and Extension*.

**Chapter 9. Of the Mathematical Method of Reasoning.** Chapter 13 in WMS220's table of contents. As I have not found any materials on the subject of the period 1872-73, I have, again, picked from The American Academy Series: *Upon the Logic of Mathematics* (1867). A paper Peirce was not satisfied with, nevertheless it presents a fair example of what his conception of reasoning in mathematics was at the time.

**Chapter 10. Of Relative and of Conjunctive Terms.** Which appear as chapters 14 and 15 in WMS220's tentative table of contents, and in a brief WMS230 as chapter 9. I have

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<sup>10</sup> Mention to a 1887-88 well-known work by Peirce.

completed it with the last parts of his great work, published in the Memoirs of the American Academy of Arts and Sciences in 1870, *Description of a notation for the logic of relatives*, where in the final section we can find a brief description of conjugative terms too. And with *Note B* from ‘Studies in Logic’, the publication of some of the Logic classes taught by Peirce at Johns Hopkins University from 1878/79, although published in 1883.

**Chapter 11. Of Probabilities.** Which appears as chapter 16 in WMS220’s table of contents. As there are no manuscripts available on the subject of the period 1872-1873, I have adopted as content his extraordinary paper *The logic of probable inference*, published, as well, in *Studies in Logic* in 1883. Where we can find very clear explanations of Probable Deduction, Statistical Deduction, Induction and Hypothesis.

**Chapter 12. Of Maxims of Reasoning.** Corresponding to chapter 17, and last, in WMS220’s table of contents. As there are no materials available on the subject of the period 1872-73, we have adopted the content from WMS166 and other associated manuscripts of the period 1869-70: *Rules for Investigation*; belonging to a formerly projected book called ‘Practical Logic’. Together with some relevant paragraphs extracted from The American Academy Series conference: *Grounds of validity of the laws of logic: Further consequences of four incapacities* (1869). Significant parts of the other conferences in this series, *Questions concerning certain faculties claimed by man* and *Consequences of four incapacities* have been included in the chapters relevant to signs and inference. These three conferences were part of the recommended readings for Peirce’s Advanced Logic class at Johns Hopkins University in 1882 as is manifest in one of this University’s Circulars.

I have also added a *Prologue*, with *The Rules of Investigation* and *The final opinion*, belonging to WMS165 (1869-70); and an *Epilogue*, with *The Introductory Lecture on the Study of Logic*, published in the Johns Hopkins University Circular of November 1882.

### 3.3 SELECTION AND DISTRIBUTION OF CONTENTS

The criteria for the selection and distribution of the main texts for each chapter are: Their relevance to the content and their ‘assaying’, avoiding redundancies; therefore, choosing the texts which present the most refined version, or the published one, or,



when it could be detected, the chronologically last<sup>11</sup>. However, in all the other available texts which are included in the Appendix to each chapter, of which I have not dared to ‘cast away’ any, we find extremely valuable paragraphs which can add something to the content of each main chapter. In the Commentary in Spanish, following the Introduction and the Survey of the pertinent *Writings* Editions, I have endeavored to make the necessary connections between these two blocks of texts for each chapter; under the assumption that other combinations of texts would have also been feasible, leaving a choice open to the reader. The Commentary also includes some indications as regards the process Peirce himself followed in the development of his thoughts upon Logic at the time, and a reference to other related early texts.

### 3.4 SUMMARY

The full thesis in Spanish, titled: *The Making of Pragmaticist Reasoning in Charles S. Peirce: A Practical Treatise on Logic and Methodology* (1867-1883); includes a *Prologue*, this Methodological Introduction, *A Practical Treatise on Logic and Methodology* by Charles S. Peirce, a Survey of the works on Logic we can find in Volumes 1, 2, 3 and 4 of the *Writings* Edition, a Commentary with a critical analysis of the texts selected for each chapter of Peirce’s Book on Logic as regards the relevant secondary bibliography, and an *Epilogue* with a synthesis of content of the *Treatise on Logic*, its projection upon Peirce’s further works on Logic, and a study of the transition in his thought on this matter as appears in the Logic papers we can find in *Writings* 5: The 1885 Algebra of Logic, further considerations on Relative Terms and, most significantly, the first revision of his theory of the Categories linked to his theory of Signs and, thus, grounding his conception of Logic as it would be later developed. The first volume of the Thesis is completed with a full comprehensive bibliography of first and secondary references; and a bibliography of Peirce’s references in the texts selected.

We must keep in mind that the core of this project is the envisioned 1870’s book of Logic by Peirce, which occupies the central part of this thesis, comprising two parts: 1. The main content of the 12 chapters in a coherent and orderly fashion; and 2, a second volume, with Appendixes to several chapters including all the remaining materials related, in a strict chronological order. And an additional Appendix with the

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<sup>11</sup> The footnotes in the Spanish version of Peirce’s *Treatise on Logic* specify the criteria for every selection of text for every chapter.

*Collected Papers* Edition of *The Logic of 1873* in Spanish, which had been the starting point for this Research Project. Finally, the *Epilogue* also points to the application of the methodology here proposed to the re-ordering of Peirce's further developments in Logic, particularly those included in the projects he named *How to Reason* and *Minute Logic*; and its culmination in his latest project, *A System of Logic, considered as Semeiotic*. This is the task I hope to be able to devote myself from now on.

***A PRACTICAL TREATISE ON LOGIC  
AND METHODOLOGY (1867-1883)***

**Charles S. Peirce**

**Composed by Miguel Angel Fernandez Perez, 2015.**



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